WHAT IS CLAIMED IS:

1. Coloring media for application to the surface of a substrate and producing a spectrum of additive-primary color effects within the vision system of a human viewer, said coloring media comprising:

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of the electromagnetic spectrum; and

a distribution of reflective microflakes suspended within said optically transparent carrier medium,

wherein each said reflective microflake in said distribution has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

2. The coloring media of claim 1, wherein said reflective microflakes are made from cholesteric liquid crystal (CLC) material having a spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a specular manner circularly polarized light within said visible band falling incident upon a coating of said coloring media so as to produce a spectrum of additive-primary color effects within the vision system of a human viewer.

3. The coloring media of claim 2, wherein each said reflective microflake comprises first and second layers of CLC material laminated together,

wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

4. The coloring media of claim 3, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

5. The coloring media of claim 3, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

5. The coloring media of claim 3, wherein each said reflective microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

6. The coloring media of claim 1, wherein said optically transparent carrier medium is an optically transparent varnish or an optically transparent wax.

7. The coloring media of claim 1, wherein said optically transparent carrier medium is a thermally curable carrier, a photon curable carrier, or air-dryable carrier.

8. Coloring media for application to the surface of a substrate and producing an super-white color effect within the vision system of a human viewer, said coloring media comprising:

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of the electromagnetic spectrum; and

reflective microflakes suspended within said optically transparent carrier medium, and having broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect light within said visible band falling incident upon a coating of said coloring media so as to produce super-white color effects,

each said reflective microflake having an upper and lower surface, and the reflection characteristics of said upper surface being substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

9. The coloring media of claim 8, wherein said reflective microflakes reflect, in a non-specular manner, light within said visible band falling incident upon a coating of said coloring media so as to produce super-white color effects independent of viewing angle.

10. The coloring media of claim 8, wherein each said reflective microflake comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

11. The coloring media of claim 8, wherein said reflective microflakes reflect light within said visible band falling incident upon a coating of said coloring media so as to produce super-white color effects similar to that produced by conventional Magnesium Oxide (MO) white paint.

12. The coloring media of claim 8, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said reflective microflake.

13. The coloring media of claim 8, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said reflective microflake.

14. The coloring media of claim 8, wherein said carrier medium is selected from the group consisting of an optically transparent varnish or an optically transparent wax.

15. The coloring media of claim 8, wherein said carrier medium is a photon curable carrier.

16. The coloring media of claim 8, wherein said carrier medium is a thermally curable carrier.

17. The coloring media of claim 8, wherein said carrier medium is an air-

curable carrier curable by evaporation.

18. The coloring media of claim 8, wherein said reflective microflakes reflect incident circularly polarized electromagnetic radiation in the ultraviolet portion of the electromagnetic spectrum and/or the infrared portion thereof.

19. The coloring media of claim 8, wherein said reflective microflakes reflect, in a specular manner, circularly polarized light within said visible band falling incident upon a coating of said coloring media so as to produce super-white color effects dependent of viewing angle.

20. The coloring media of claim 8, wherein each said reflective microflake has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

21. The coloring media of claim 8, wherein said reflective microflakes reflect incident circularly polarized electromagnetic radiation in the infrared portion of the electromagnetic spectrum.

22. The coloring media of claim 8, wherein said reflective microflakes reflect incident circularly polarized electromagnetic radiation in the ultraviolet portion of the electromagnetic spectrum.

23. The coloring media of claim 8, wherein said reflective microflakes reflect incident left-handed circularly polarized (LHCP) electromagnetic radiation.

23. The coloring media of claim 8, wherein said reflective microflakes reflect incident right-handed circularly polarized (RHCP) electromagnetic radiation.

24. The coloring media of claim 8, wherein said reflective microflakes reflect incident un-polarized electromagnetic radiation.

25. Cholesteric liquid crystal (CLC) coloring media for application to the surface of a substrate and producing an super-white color effect within the vision system of a human viewer, said CLC coloring media comprising:

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of the electromagnetic spectrum; and

CLC microflakes suspended within said optically transparent carrier medium,

said CLC microflakes being made from CLC material having a broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce super-white color effects.

26. The CLC coloring media of claim 25, wherein said CLC microflakes

reflect, in a non-specular manner, circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce super-white color effects independent of viewing angle.

27. The CLC coloring media of claim 25, wherein each said CLC microflake has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

28. The CLC coloring media of claim 27, wherein each said CLC microflake comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

29. The CLC coloring media of claim 25, wherein said CLC microflakes reflect circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce super-white color effects similar to that produced by conventional Magnesium Oxide (MO) white paint.

30. The CLC coloring media of claim 25, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

31. The CLC coloring media of claim 28, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

32. The CLC coloring media of claim 25, wherein said carrier medium is selected from the group consisting of an optically transparent varnish or an optically transparent wax.

33. The CLC coloring media of claim 25, wherein said carrier medium is a photon curable carrier.

34. The CLC coloring media of claim 25, wherein said carrier medium is a thermally curable carrier.

35. The CLC coloring media of claim 25, wherein said carrier medium is an air-curable carrier curable by evaporation.

36. The CLC coloring media of claim 25, wherein said microflakes reflect incident circularly polarized electromagnetic radiation in the ultraviolet portion of the electromagnetic spectrum and/or the infrared portion thereof.

37. The CLC coloring media of claim 25, wherein said CLC microflakes reflect, in a specular manner, circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to

produce super-white color effects dependent of viewing angle.

38. The CLC coloring media of claim 25, wherein each said CLC microflake has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

39. The CLC coloring media of claim 38, wherein each said CLC microflake comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

40. The CLC coloring media of claim 25, wherein said CLC microflakes reflect circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce super-white color effects similar to that produced by conventional Magnesium Oxide (MO) white paint.

41. The CLC coloring media of claim 25, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

42. The CLC coloring media of claim 28, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal

molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

43. The CLC coloring media of claim 25, wherein said carrier medium is selected from the group consisting of an optically transparent varnish or an optically transparent wax.

44. The CLC coloring media of claim 25, wherein said microflakes reflect incident circularly polarized electromagnetic radiation in the infrared portion of the electromagnetic spectrum.

45. The CLC coloring media of claim 25, wherein said microflakes reflect incident circularly polarized electromagnetic radiation in the ultraviolet portion of the electromagnetic spectrum.

46. The CLC coloring media of claim 25, wherein said microflakes reflect incident left-handed circularly polarized (LHCP) electromagnetic radiation.

47. The CLC coloring media of claim 25, wherein said microflakes reflect incident right-handed circularly polarized (RHCP) electromagnetic radiation.

48. The CLC coloring media of claim 25, wherein said microflakes reflect incident un-polarized electromagnetic radiation.

49. Cholesteric liquid crystal (CLC) coloring media for application to the

surface of a substrate and producing a prespecified additive-primary color effect independent of viewing angle, said CLC coloring media comprising:

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of the electromagnetic spectrum; and

CLC microflakes suspended within said optically transparent carrier medium,

said CLC microflakes being made from CLC material having a spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a non-specular manner circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce a prespecified additive-primary color effect within the vision system of a human viewer independent of viewing angle.

50. The CLC coloring media of claim 49, wherein each said CLC microflake has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

51. The CLC coloring media of claim 50, wherein each said CLC microflake comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

52. The CLC coloring media of claim 49, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

53. The CLC coloring media of claim 52, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

54. The CLC coloring media of claim 52, wherein each said CLC microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

55. The CLC coloring media of claim 52, wherein said carrier medium is an optically transparent varnish or an optically transparent wax.

56. The CLC coloring media of claim 52, wherein said carrier medium is a thermally curable carrier, a photon curable carrier, or an air-dryable carrier medium.

57. The CLC coloring media of claim 49, wherein said prespecified additive-primary color effect is either the color red, green or blue.

58. The CLC coloring media of claim 49, wherein said prespecified additive-primary color effect is any arbitrary color composed from any

combination the additive-primary colors red, green and blue.

59. Cholesteric liquid crystal (CLC) coloring media for application to the surface of a substrate and producing a spectrum of additive-primary color effects dependent upon viewing angle, said CLC coloring media comprising:

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of the electromagnetic spectrum; and

a distribution of CLC microflakes suspended within said optically transparent carrier medium,

wherein each said CLC microflake has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum, and

wherein each said CLC microflake is made from CLC material having a spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect, in a specular manner, circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce a spectrum of additive-primary color effects within the vision system of a human viewer.

60. The CLC coloring media of claim 59, wherein each said CLC microflake comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

61. The CLC coloring media of claim 60, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

62. The CLC coloring media of claim 61, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

63. The CLC coloring media of claim 59, wherein each said CLC microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

64. The CLC coloring media of claim 59, wherein said carrier medium is an optically transparent varnish or an optically transparent wax.

65. The CLC coloring media of claim 59, wherein said carrier medium is a thermally curable carrier, a photon curable carrier, or an air-dryable carrier curable by evaporation.

66. Cholesteric liquid crystal (CLC) coloring media for application to the surface of a substrate and producing color effects within the vision system of a human viewer, said CLC coloring media comprising:

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of

the electromagnetic spectrum; and

a distribution of CLC microflakes suspended within said optically transparent carrier medium,

wherein each said CLC microflake in said distribution has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

67. The CLC coloring media of claim 66, wherein said CLC microflakes are made from CLC material having a spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a specular manner circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce a spectrum of additive-primary color effects within the vision system of a human viewer.

68. The CLC coloring media of claim 67, wherein each said CLC microflake comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

69. The CLC coloring media of claim 68, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

70. The CLC coloring media of claim 68, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

71. The CLC coloring media of claim 66, wherein said optically transparent carrier medium is an optically transparent varnish or an optically transparent wax.

72. The CLC coloring media of claim 66, wherein each said CLC microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

73. The CLC coloring media of claim 66, wherein said optically transparent carrier medium is a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

74. The CLC coloring media of claim 66, wherein said CLC microflakes are made from CLC material having a broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a specular manner circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce super-white color effects independent of viewing angle within the vision system of a human viewer.

75. The CLC coloring media of claim 66, wherein each said CLC microflake

comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

76. The CLC coloring media of claim 66, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

77. The CLC coloring media of claim 66, wherein each said CLC microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

78. The CLC coloring media of claim 66, wherein said optically transparent carrier medium is an optically transparent varnish or an optically transparent wax.

79. The CLC coloring media of claim 66, wherein said optically transparent carrier medium is a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

80. The CLC coloring media of claim 66, wherein each said CLC microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

81. Cholesteric liquid crystal (CLC) coloring media system for producing a palette of color effects, including super-white and/or additive-primary color effects, on a radiation absorbing substrate, said CLC coloring media comprising:

(A) a supply of super-white CLC coloring media including

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of the electromagnetic spectrum, and

CLC microflakes suspended within said optically transparent carrier medium,

said CLC microflakes being made from CLC material having a broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce super-white color effects within the vision system of a human viewer; and

(B) a plurality of supplies of additive-primary CLC coloring media, each said for application to the surface of a substrate and producing a prespecified additive-primary color effect, said supply of additive-primary CLC coloring media CLC coloring media including

an optically transparent carrier medium capable of being applied to said surface, and

CLC microflakes suspended within said optically transparent carrier medium,

said CLC microflakes being made from CLC material having a spectrally-tuned reflection characteristics over the visible band of the

electromagnetic spectrum so as to reflect circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce a prespecified additive-primary color effect within the vision system of a human viewer.

82. The CLC coloring media system of claim 81, wherein each said CLC microflake in said supply of super-white CLC coloring media has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

83. The CLC coloring media system of claim 82, wherein each said CLC microflake in said supply of super-white CLC coloring media comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

84. The CLC coloring media system of claim 81, wherein said CLC microflakes in said supply of super-white CLC coloring media reflect, in a non-specular manner, circularly polarized light within said visible band falling incident upon a coating of said CLC coloring media so as to produce super-white color effects comparable to that produced by conventional Magnesium Oxide (MO) white paint.

85. The CLC coloring media system of claim 81, wherein each said CLC microflake in said supply of super-white CLC coloring media is made from

film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

86. The CLC coloring media system of claim 85, wherein each said CLC microflake in said supply of super-white CLC coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

87. The CLC coloring media system of claim 81, wherein said carrier medium of said supply of super-white CLC coloring media is an optically transparent varnish or an optically transparent wax.

88. The CLC coloring media system of claim 81, wherein said carrier medium of said supply of super-white CLC coloring media is a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

89. The CLC coloring media system of claim 81, wherein said microflakes reflect incident circularly polarized electromagnetic radiation in the infrared portion of the electromagnetic spectrum.

90. The CLC coloring media system of claim 81, wherein said microflakes reflect incident circularly polarized electromagnetic radiation in the ultraviolet portion of the electromagnetic spectrum.

91. The CLC coloring media system of claim 81, wherein each said CLC microflake in each said supply of additive-primary CLC coloring media has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

92. The CLC coloring media system of claim 91, wherein each said CLC microflake in each said supply of additive-primary CLC coloring media comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

93. The CLC coloring media of claim 81, wherein each said CLC microflake in each said supply of additive-primary CLC coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

94. The CLC coloring media system of claim 81, wherein each said CLC microflake in each said supply of additive-primary CLC coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

95. The CLC coloring media of claim 81, wherein each said CLC microflake is made from materials having a cholesterically ordered liquid crystal

molecules having a constant or substantially constant pitch.

96. The CLC coloring media system of claim 81, wherein said prespecified additive-primary color effect produced from each said supply of additive-primary CLC coloring media is either the color red, green or blue.

97. The CLC coloring media system of claim 96, wherein said super-white color effect produced from said supply of super-white CLC coloring media is comparable to that produced by conventional Magnesium Oxide (MO) white paint.

98. A color image structure for producing an image characterized by one or more prespecified additive-primary color effects presented to a viewer independent of viewing angle, said color image structure comprising:

a surface having radiation absorbing characteristics over the visible band of the electromagnetic spectrum; and

one or more coatings of additive-primary coloring media applied to said surface,

wherein each said coating of additive-primary coloring media includes

an optically transparent carrier medium adherable to said surface, and

reflective microflakes suspended within said optically transparent carrier medium,

said reflective microflakes in each said coating of additive-primary coloring media being made from material having a

spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect, in a non-specular manner, light within said visible band falling incident upon said coating of said coloring media so as to produce one or more prespecified additive-primary color effects within the vision system of a human viewer independent of viewing angle, and

each said reflective microflake in each said coating of additive-primary coloring media having an upper and lower surface, wherein the reflection characteristics of said upper surface are substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

99. The color image structure of claim 98, wherein each said reflective microflake in each said coating of additive-primary coloring media is made from a material selected from the group consisting of cholesteric liquid crystal material, interference film material and holographic film material.

100. The color image structure of claim 98, wherein each said CLC microflake in each said coating of additive-primary coloring media comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

101. The color image structure of claim 98, wherein each said CLC microflake in each said coating of additive-primary coloring media is made from film material having a cholesterically ordered liquid crystal

molecules having a substantially constant pitch across the thickness of each said CLC microflake.

102. The CLC coloring media of claim 101, wherein each said CLC microflake in each said coating of additive-primary coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a substantially constant pitch across the thickness of each said CLC microflake.

103. The color image structure of claim 98, wherein said carrier medium of each said coating of additive-primary coloring media is an optically transparent varnish or an optically transparent wax.

104. The color image structure of claim 98, wherein said carrier medium of each said coating of additive-primary coloring media is a thermally curable carrier, a photon curable carrier, or an air-dryable carrier curable by evaporation.

105. The color image structure of claim 98, wherein the size of said CLC microflakes in each said coating of additive-primary coloring media is within the range of about 5 to about 10 microns.

106. The color image structure of claim 105, wherein the thickness of said carrier medium of each said coating of additive-primary coloring media is at least 5 microns.

107. The color image structure of claim 98, wherein said prespecified additive-primary color effect produced from each said coating of additive-primary CLC coloring media is either the color red, green or blue or any arbitrary color made composed from any combination thereof.

108. An image structure for producing super-white color effects, said image structure comprising:

a surface having radiation absorbing characteristics over the visible band of the electromagnetic spectrum; and

one or more coatings of super-white coloring media applied to said surface to form at least a portion of said image,

wherein each said coating of super-white coloring media includes

an optically transparent carrier medium adherable to said surface, and

reflective microflakes suspended within said optically transparent carrier medium,

said reflective microflakes in each said coating of super-white coloring media being made from material having a broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect light within said visible band falling incident upon said coating of said coloring media so as to produce super-white color effects within the vision system of a human viewer,

each said reflective microflake in each said coating of additive-primary coloring media has an upper and lower surface, wherein the reflection characteristics of said upper surface are substantially the same as the reflection characteristics of said lower surface over the visible band

of said electromagnetic spectrum.

109. The image structure of claim 108, wherein each said CLC microflake in each said coating of additive-primary coloring media is made from a material selected from the group consisting of cholesteric liquid crystal material, interference film material and holographic film material.

110. The image structure of claim 108, wherein said super-white color effects produced from said super-white CLC coloring media is comparable to that produced by conventional Magnesium Oxide (MO) white paint.

111. The image structure of claim 108, wherein each said reflective microflake in said supply of super-white coloring media is a super broadband CLC material.

112. The image structure of claim 108, wherein each said reflective microflake in each said coating of super-white coloring media comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

113. The image structure of claim 108, wherein each said reflective microflake in each said coating of super-white coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said reflective microflake.

114. The image structure of claim 113, wherein each said reflective microflake in each said coating of super-white coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said reflective microflake.

115. The image structure of claim 108, wherein said carrier medium of each said coating of super-white coloring media is an optically transparent varnish or an optically transparent wax.

116. The image structure of claim 108, wherein said carrier medium of each said coating of super-white coloring media is either a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

117. The image structure of claim 108, wherein the size of said reflective microflakes in each said coating of super-white coloring media is at least about 60 microns, and the thickness of said carrier medium of each said coating of super-white coloring media is at least about 60 microns.

118. The image structure of claim 108, wherein said reflective microflakes in each said coating of super-white coloring media reflect, in a specular manner, light within said visible band falling incident upon said coating of said coloring media so as to produce super-white color effects within the vision system of a human viewer dependent on viewing angle.

119. The image structure of claim 108, wherein said reflective microflakes in each said coating of super-white coloring media reflect, in a non-specular manner, light within said visible band falling incident upon said coating of said coloring media so as to produce super-white color effects within the vision system of a human viewer dependent on viewing angle independent of viewing angle.

120. The image structure of claim 108, wherein said reflective microflakes in each said coating of super-white coloring media reflect left-handed or right-handed circularly polarized light within said visible band.

121. The image structure of claim 95, wherein said reflective microflakes in one said coating of super-white coloring media reflect left-handed circularly polarized light within said visible band, whereas said reflective microflakes in another said coating of super-white coloring media reflect right-handed circularly polarized light within said visible band.

122. A color image structure for producing a full-color image characterized by red, green and blue additive-primary color effects and super-white color effects presented to a viewer, said color image structure comprising:

(A) a surface having radiation absorbing characteristics over the visible band of the electromagnetic spectrum;

(B) one or more coatings of additive-primary CLC coloring media applied to said surface to form at least a portion of said color image,

wherein each said coating of additive-primary CLC coloring media

includes

an optically transparent carrier medium adherable to said surface, and

CLC microflakes suspended within said optically transparent carrier medium,

said CLC microflakes in each said coating of additive-primary CLC coloring media being made from CLC material having a spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect light within said visible band falling incident upon said coating of said CLC coloring media so as to produce red, green and blue additive-primary color effects within the vision system of a human viewer; and

(C) one or more coatings of super-white CLC coloring media applied to said surface,

wherein each said coating of super-white CLC coloring media includes

an optically transparent carrier medium adherable to said surface, and

CLC microflakes suspended within said optically transparent carrier medium,

said CLC microflakes in each said coating of super-white CLC coloring media being made from CLC material having a broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect light within said visible band falling incident upon said coating of said CLC coloring media so as to produce super-white color effects within the vision system of a human viewer.

123. The color image structure of claim 122, wherein said CLC microflakes in each said coating of additive-primary CLC coloring media reflect, in a non-specular manner, light within said visible band falling incident upon said coating of said CLC coloring media so as to produce red, green and blue additive-primary color effects within the vision system of a human viewer independent of viewing angle; and

wherein said CLC microflakes in each said coating of super-white CLC coloring media reflect, in a non-specular manner, light within said visible band falling incident upon said coating of said CLC coloring media so as to produce super-white color effects within the vision system of a human viewer independent of viewing angle.

124. The color image structure of claim 122, wherein each said CLC microflake in each said coating of additive-primary coloring media has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

125. The color image structure of claim 122, wherein each said CLC microflake in each said coating of additive-primary coloring media comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

126. The color image structure of claim 122, wherein each said CLC microflake in each said coating of additive-primary coloring media is made

from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

127. The color image structure of claim 126, wherein each said CLC microflake in each said coating of additive-primary coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

128. The color image structure of claim 123, wherein said carrier medium of each said coating of additive-primary coloring media is an optically transparent varnish or an optically transparent wax.

129. The color image structure of claim 123, wherein said carrier medium of each said coating of additive-primary coloring media is either a thermally curable carrier or a photon curable carrier.

130. The color image structure of claim 123, wherein the size of said CLC microflakes in each said coating of additive-primary coloring media is within the range of about 5 to about 10 microns.

131. The color image structure of claim 123, wherein each said CLC microflake in each said coating of additive-primary coloring media has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of

said lower surface over the visible band of said electromagnetic spectrum.

132. The color image structure of claim 123, wherein said super-white color effects produced from said super-white CLC coloring media is comparable to that produced by conventional Magnesium Oxide (MO) white paint.

133. The color image structure of claim 123, wherein each said CLC microflake in said supply of super-white CLC coloring media has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

134. The color image structure of claim 133, wherein each said CLC microflake in each said coating of super-white CLC coloring media comprises first and second layers of CLC material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

135. The color image structure of claim 123, wherein each said CLC microflake in each said coating of super-white CLC coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said CLC microflake.

136. The color image structure of claim 135, wherein each said CLC

microflake in each said coating of super-white CLC coloring media is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said CLC microflake.

137. The color image structure of claim 123, wherein said carrier medium of each said coating of super-white CLC coloring media is an optically transparent varnish or an optically transparent wax.

138. The color image structure of claim 123, wherein said carrier medium of each said coating of super-white CLC coloring media is a thermally curable carrier.

139. The color image structure of claim 123, wherein said carrier medium of each said coating of super-white CLC coloring media is a photon curable carrier.

140. The image structure of claim 123, wherein said CLC microflakes in each said coating of super-white CLC coloring media reflect left-handed or right-handed circularly polarized light within said visible band.

141. The image structure of claim 140, wherein said CLC microflakes in each said coating of additive-primary CLC coloring media reflect left-handed or right-handed circularly polarized light within said visible band.

142. The image structure of claim 123, wherein said CLC microflakes in

one said coating of super-white CLC coloring media reflect left-handed circularly polarized light within said visible band, whereas said CLC microflakes in another said coating of super-white CLC coloring media reflect right-handed circularly polarized light within said visible band.

143. The image structure of claim 142, wherein said CLC microflakes in one said coating of additive-primary CLC coloring media reflect left-handed circularly polarized light within said visible band, whereas said CLC microflakes in another said coating of additive-primary CLC coloring media reflect right-handed circularly polarized light within said visible band.

144. Coloring media for application to the surface of a substrate and producing color effects within the vision system of a human viewer, said coloring media comprising:

an optically transparent carrier medium capable of being applied to a surface having radiation absorption characteristics over the visible band of the electromagnetic spectrum; and

a distribution of reflective microflakes suspended within said optically transparent carrier medium,

wherein each said reflective microflake in said distribution has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

145. The coloring media of claim 144, wherein said reflective microflakes

are made from material having a spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a specular manner light within said visible band falling incident upon a coating of said coloring media so as to produce a spectrum of additive-primary color effects within the vision system of a human viewer.

146. The coloring media of claim 145, wherein each said reflective microflake comprises first and second layers of material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

147. The coloring media of claim 146, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said reflective microflake.

148. The coloring media of claim 146, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said reflective microflake.

149. The coloring media of claim 144, wherein said optically transparent carrier medium is an optically transparent varnish or an optically transparent wax.

150. The coloring media of claim 144, wherein each said reflective microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

151. The coloring media of claim 144, wherein said optically transparent carrier medium is a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

152. The coloring media of claim 144, wherein said reflective microflakes are made from material having a broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a specular manner circularly polarized light within said visible band falling incident upon a coating of said coloring media so as to produce super-white color effects independent of viewing angle within the vision system of a human viewer.

153. The coloring media of claim 144, wherein each said reflective microflake comprises first and second layers of material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

154. The coloring media of claim 144, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said microflake.

155. The coloring media of claim 144, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said reflective microflake.

156. The coloring media of claim 144, wherein said optically transparent carrier medium is an optically transparent varnish or an optically transparent wax.

157. The coloring media of claim 144, wherein said optically transparent carrier medium is a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

158. The coloring media of claim 144, wherein each said reflective microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

159. A coloring media coating applied to the surface of a substrate having radiation absorption characteristics over at least a portion of the visible band of the electromagnetic spectrum, and producing color effects within the vision system of a human viewer, said coloring media coating comprising:

a distribution of reflective microflakes suspended within said coloring media coating,

wherein each said reflective microflake in said distribution has an

upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

160. The coloring media coating of claim 159, which further comprises:

an optically transparent carrier medium capable of being applied to said surface.

161. The coloring media coating of claim 159, wherein said reflective microflakes are made from material having a spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a specular manner light within said visible band falling incident upon a coating of said coloring media so as to produce a spectrum of additive-primary color effects within the vision system of a human viewer.

162. The coloring media coating of claim 159, wherein each said reflective microflake comprises first and second layers of material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

163. The coloring media coating of claim 159, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said reflective microflake.

164. The coloring media coating of claim 159, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said reflective microflake.

165. The coloring media coating of claim 159, wherein said optically transparent carrier medium is an optically transparent varnish or an optically transparent wax.

166. The coloring media coating of claim 159, wherein each said reflective microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

167. The coloring media coating of claim 159, wherein said optically transparent carrier medium is a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

168. The coloring media coating of claim 159, wherein said reflective microflakes are made from material having a broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect in a specular manner circularly polarized light within said visible band falling incident upon a coating of said coloring media so as to produce super-white color effects independent of viewing angle within the vision system of a human viewer.

169. The coloring media coating of claim 159, wherein each said reflective microflake comprises first and second layers of material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

170. The coloring media coating of claim 159, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said microflake.

171. The coloring media coating of claim 159, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said reflective microflake.

172. The coloring media coating of claim 160, wherein said optically transparent carrier medium is an optically transparent varnish or an optically transparent wax.

173. The coloring media coating of claim 160, wherein said optically transparent carrier medium is a thermally curable carrier, a photon curable carrier or an air-dryable carrier.

174. The coloring media coating of claim 159, wherein each said reflective microflake is made from materials having a cholesterically ordered liquid

crystal molecules having a constant or substantially constant pitch.

175. CLC-based toner for use in xereographically printing images upon the surface of a substrate having radiation absorption characteristics, and which are capable of producing color effects within the vision system of a human viewer, said CLC-based toner comprising:

a distribution of reflective microflakes, each said reflective microflake being made from cholesteric liquid crystal material having light reflection characteristics in over at least a portion of the visible band, and being electrostatically attracted to an electric charge pattern formed on said substrate during an image recording process.

176. The CLC-based toner of claim 175, wherein each said reflective microflake in said distribution has an upper and lower surface, and that the reflection characteristics of said upper surface is substantially the same as the reflection characteristics of said lower surface over the visible band of said electromagnetic spectrum.

177. The CLC-based toner of claim 175, wherein said reflective microflakes have spectrally-tuned reflection characteristics over the visible band of the electromagnetic spectrum and reflect, in a specular manner, light within said visible band falling incident upon a coating of said CLC toner so as to produce a spectrum of additive-primary color effects within the vision system of a human viewer.

178. The CLC-based toner of claim 176, wherein each said reflective

microflake comprises first and second layers of material laminated together, wherein said upper surface is physically associated with said first layer and said lower surface is physically associated with said second layer.

179. The CLC-based toner of claim 175, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in a non-linear manner across the thickness of each said reflective microflake.

180. The CLC-based toner of claim 175, wherein each said reflective microflake is made from film material having a cholesterically ordered liquid crystal molecules having a pitch which varies in an exponential manner across the thickness of each said reflective microflake.

181. The CLC-based toner of claim 175, wherein each said reflective microflake is made from materials having a cholesterically ordered liquid crystal molecules having a constant or substantially constant pitch.

182. The CLC-based toner of claim 175, wherein said reflective microflakes have broadband reflection characteristics over the visible band of the electromagnetic spectrum so as to reflect, in a specular manner, circularly polarized light within said visible band falling incident upon a coating of said CLC-based toner so as to produce super-white color effects independent of viewing angle within the vision system of a human viewer.

183. The CLC-based toner of claim 175, wherein each said reflective microflake comprises a layer of adhesive for permanently adhering said reflective microflakes to said substrate.

184. The CLC-based toner of claim 175, which further comprises adhesive material admixed with said distribution of said reflective microflakes for permanently adhering said reflective microflakes to said substrate during an image fixing stage of said xerographic process.

185. A xereographic printing machine comprising:

a toner cartridge containing the CLC-based toner of claim 175.

186. A xerographically printed image formed using the CLC-based toner of claim 175.

187. A toner cartridge for use in a xerographic printing machine, said toner cartridge comprising:

the CLC-based toner of claim 175.